Sun O. T. C. C.

FILE NOTATIONS

Entered In N I D File ....

Entered On S R Sheet ....

Location Map Pinned ....

Card Indexed ....

I W R for State or Fee Land ....

Checked by Chief ....

Copy N I D to Field Office ....

Approval Letter ....

Disapproval Letter ....

COMPLETION DATA:

Date Well Completed 7-5-53 finished drilling

OW........ WW........ TA........

GW ✓ OS........ PA........

Location Inspected ....

Bond released
State of Fee Land ....

LOGS FILED

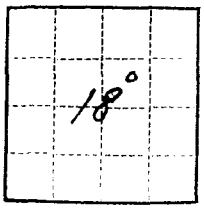
Driller's Log ✓

Electric Logs (No.) ....

E........ I........ E-I........ GR........ GR-N........ Micro........

Lat........ Mi-L........ Sonic........ Others........

Form 9-331a
(Feb. 1951)



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau 42-R358.2.
Approval expires 12-31-52.

Land Office Salt Lake City
Lease No. U-06099
Unit Not Unitized

ORIGINAL FORWARDED TO CASPER

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	X	SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

March 26, 19 53

Mounds Gov't

Well No. #3 is located 1980 ft. from N line and 1980 ft. from E line of sec. 18

NE ¼ Sec. 18 (¼ Sec. and Sec. No.) | 15 South (Twp.) | 12 East (Range) | SLM (Meridian)

Wildcat Mounds Area (Field) | Carbon (County or Subdivision) | Utah (State or Territory)

The elevation of the derrick floor above sea level is ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

In our records this well will be referred to as Mounds #3 Government.

Drilling will commence in the Mancos shale a few feet above the top of the Ferron sandstone and will be carried on to a depth of approximately 5,000 feet or a depth sufficient to test the Coconino sandstone. It is estimated on the basis of present control that the top of the Coconino sandstone will be reached at a depth of 4,870 feet. A close examination of any productive possibilities of shallower formations will be made - particularly the Marine Moenkopi section. Surface pipe (10 3/4") will be ~~set at~~ cemented to surface from approximately 450 feet or through the Dakota sandstone. Samples will be taken at each 10 foot interval from the surface and it is planned to run an electrical log on the well on termination of the drilling operation. Size of the drill hole below surface pipe will be 8 3/4 inches and all drilling operations will be carried on with rotary tools.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Equity Oil Company

Address 400 Utah Oil Building

Salt Lake City, Utah

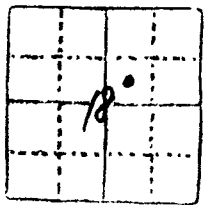
(APPROVAL IS CONDITIONAL UPON COMPLIANCE WITH THE TERMS ATTACHED HERETO)

By [signature]

Title Secretary & Treasurer

U. S. GOVERNMENT PRINTING OFFICE 16—8437-4

Form 9-331a
(March 1942)



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
ORIGINAL FORWARDED TO CASPER

Budget Bureau No. 42-R358.1.
Approval expires 11-30-49.

Land Office Salt Lake City
Lease No. U-06099
Unit Not Unitized

RECEIVED
MAY 1 - 1953
[illegible]

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	X
NOTICE OF INTENTION TO ABANDON WELL		Drill Stem Test	X
		Sample Formation Tops	X

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

May 1, 19 53

Mounds Gov't.

Well No. #3 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 18

NE¼ Sec. 18 (¼ Sec. and Sec. No.) | 15 S (Twp.) | 12 E (Range) | SLM (Meridian)

Wildcat Mounds Area (Field) | Carbon (County or Subdivision) | Utah (State or Territory)

The elevation of the derrick floor above sea level is [illegible]

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U. S. GEOLOGICAL SURVEY OFFICE USE ONLY

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Sample Tops (Tenative)	
Dakota	420
Cedar Mountain	448
Buckhorn	855
Morrison	880
Curtis	1880
Entrada	2015
Carmel	2465
Navajo	2835

Drilling @ 2905. DST 2800-2869. Open 40 minutes. Gas to surface one-half minute. Pressure after one and one-half minutes 270 pounds open 2 inch flow line. Initial hydrostatic pressure 1405 pounds, Initial Flow Pressure 470 pounds, Final Flow Pressure 650 pounds, Sealed in Bottom Hole Pressure 15 minutes 1008 pounds, Final Hydrostatic pressure 1405 pounds. Recovered 20 feet gas cut water and mud. Tenative Kelly Busing elevation 5796.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Equity Oil Company

Address 400 Utah Oil Building

Salt Lake City, Utah

By V. E. Peterson

Title Vice President

Approved MAY 1 - 1953

(Orig. Sgd.) H. C. Scoville
District Engineer

U. S. GOVERNMENT PRINTING OFFICE 16-8487-8

Form 9-331 a
(March 1942)

(SUBMIT IN TRIPLICATE)

Budget Bureau No. 42-R358.1.
Approval expires 11-30-49.

Land Office Salt Lake City

Lease No. U-06099

Unit Not Unitized

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ORIGINAL FORWARDED TO CASPER

RECEIVED JUL 8 - 1953 OIL & GAS OP. U. S. GEOLOGICAL SURVEY SALT LAKE CITY, UTAH

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
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NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL			
Notice of Int. to Run Casing	X		

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

July 3, 1953

Well No. Mounds #3 Gov't. is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 18

NE¼ 18 (¼ Sec. and Sec. No.) 15 S (Twp.) 12 E (Range) SLM (Meridian)

Wildcat Mounds (Field) Carbon (County or Subdivision) Utah (State or Territory)

The elevation of the derrick floor above sea level is .... ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Present TD 5254. To set open hole bridging plug at 5,113 and dump one bailer cement on top plug. To run 7" J-55 20# to 4,315 with 500 sacks cement. To perforate Navajo sandstone 2830-70 and attempt to comple as a gas well.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Equity Oil Company

Address 400 Utah Oil Building

Salt Lake City, Utah

By V E Peterson

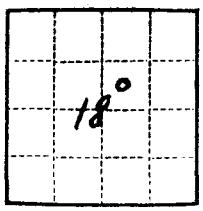
Title Vice President

Approved 7-7-53 [illegible]

[signature]
District Engineer

U. S. GOVERNMENT PRINTING OFFICE 16-8437-8

Form 9-331a
(Feb. 1951)

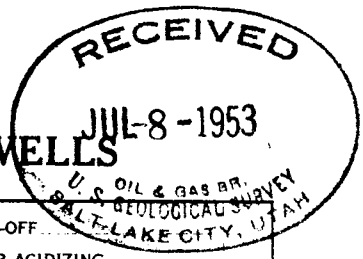


(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Budget Bureau 42-R358.2.
Approval expires 12-31-52.

Land Office Salt Lake City
Lease No. U-06099
Unit Not Unitized



ORIGINAL FORWARDED TO CASPER

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING
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NOTICE OF INTENTION TO SHOOT OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONMENT
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY
NOTICE OF INTENTION TO ABANDON WELL	Subsequent Report of Setting Casing X

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

July 6, 19 53

Well No. Mounds #3 Gov't. is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 18

NE¼ 18 (¼ Sec. and Sec. No.) | 15 S (Twp.) | 12 E (Range) | SLM (Meridian)

Wildcat - Mounds (Field) | Carbon (County or Subdivision) | Utah (State or Territory)

The elevation of the derrick floor above sea level is ____ ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Set 7" 20# J-55 csg. at 4,315 with 500 sacks cement. Set open hole bridging plug at 5,113, and dumped one bailer cement on top of plug. To perforate 2830-70 and attempt to complete as a gas well.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Equity Oil Company

Address 400 Utah Oil Building

Salt Lake City, Utah

By V. E. Peterson

Title Vice President

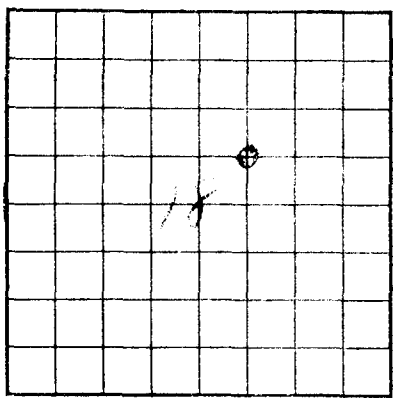
Approved 7-14-53

J. A. Greer
District Engineer

U. S. GOVERNMENT PRINTING OFFICE 16—8437-4

Form 9-330

P t Bureau No. 42-R355.1.
val expires 11-30-49.



LOCATE WELL CORRECTLY

U. S. LAND OFFICE Salt Lake City
SERIAL NUMBER U-06099
LEASE OR PERMIT TO PROSPECT

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED JUL 17 1953 U. S. OIL & GAS DIV. GEOLOGICAL SURVEY SALT LAKE CITY, UTAH

ORIGINAL FORWARDED TO CASPER

LOG OF OIL OR GAS WELL

Company Equity Oil Company Address 400 Utah Oil Bldg. SLC, Utah

Lessor or Tract Field East Farnham State Utah

Well No. Gov't. Hounds #3 Sec. 18 T. 15S R. 12E Meridian SLM County Carbon

Location 1980 ft. {N.} of N Line and 1980 ft. {E.} of E Line of Sec. 18 Elevation 6796 DF
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed [signature]

Date July 17, 1953 Title Vice President

The summary on this page is for the condition of the well at above date.

Commenced drilling April 4, 1953, 19.. Finished drilling 7-5-1953, 19..

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 2835 to 2920 or - No. 4, from ... to ...

No. 2, from (gas water contact not determined) No. 5, from ... to ...

No. 3, from ... to ... No. 6, from ... to ...

IMPORTANT WATER SANDS

No. 1, from ... to ... No. 3, from ... to ...

No. 2, from ... to ... No. 4, from ... to ...

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
10 3/4"	12 joint of 32.75 lb. J-55 , 2 joints of ~~40.50~~ set at 457'.								
7"	20# JJ-55 csg. at ~~4315~~ 4315, cemented from shoe to 1150 ft.								

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used

FOLD | MARK

PLUGS AND ADAPTERS

Heaving plug—Material Open hole bridging plug Length ... Depth set 5113

Adapters—~~Material~~ ... Size ...

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out
Perforated from 2830 to 70 and from 2880 to 2920 with four shots to the foot.						

TOOLS USED

Rotary tools were used from 0 feet to TD feet, and from ... feet to ... feet

Cable tools were used from ... feet to ... feet, and from ... feet to ... feet

DATES

July 17, 1953, 19.. Put to producing (Not yet on production)

The production for the first 24 hours was ... barrels of fluid of which ... % was oil; ... % emulsion; ... % water; and ... % sediment. Gravity, °Bé. ...

If gas well, cu. ft. per 24 hours 18,000 MCF Gallons gasoline per 1,000 cu. ft. of gas CO_2

Rock pressure, lbs. per sq. in. ...

EMPLOYEES

W. D. Anderson, Driller B. A. Mortensen, Driller

Dallas Goodrich, Driller ..., Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
			(See attached sheets for detailed report on well log and drill stem test.)

DRILL STEM TESTS

Equity Oil Company
#3 Mounds (Gov't.)
Carbon County, Utah
SW,, NE, Sec. 18
Twp. 15 S, Range 12 E

Top Navajo Sandstone - 2806' (Schlumberger)

DST #1

2800 - 2869' - 1" b. h. choke, open 40 mins.; shut-in 18 minutes; gas (CO_2) to surface in ½ min w/violent blow, blk. watery sulphur-cut-drilling mud to surface in 27 minutes. Turned into 2" flow line. Static press guage registered 270# w/1" choke. Recovered 20' gas and mud-cut sulphur water

IHP	-	1405#
IFP	-	470#
FFP	-	650#
SIP	-	1008#
FHP	-	1405#

Top Shinarump Zone - 3780' (Schlumberger)

DST #2

3720 - 3789' - 1" b. h. choke, open 15 minutes did not shut in ver weak blow and died. Recovered 5' of drilling mud.

IHP	1750#
IFP	0#
FFP	0#
SIP	Did not shut in
FHP	1750#

Top Marine Moenkopi - 4256' (Schlumberger)

DST #3

4323 - 4413' - 1" b. h. choke, open 60 minutes; shut-in 30 minutes very weak blow for 10 minutes, and died. Recovered 15' drilling mud.

IHP	2160#
IFP	0#
FFP	0#
SIP	20#
FHP	2160#

Top Sinbad Limestone - 4413' (Schlumberger)

DST #4

4447' - 4524' Open six hours; shut-in 60 minutes weak blow for 55 minutes, and died. After 2½ hours, began blowing (weak blow), and continued throughout test.

IHP	2180#
IFP	8#
FFP	10#
SIP	300#
FHP	2180#

Top Kaibab Limestone - 4762' (Schlumberger)

DST #5 4[illegible] - 4885' 5/8" b. h. choke, open 70 minutes; shut-in 30 minutes. Good blow, gas (CO2, w/strong H2S odor) to surface in 11 minutes. Recovered an estimated 2,048 MCF gas, and 180' fluid; 90' gas-cut mud and 90' sli. salty black sulphur water.

IHP	2455#
IFP	80#
FFP	405#
SIP	1525#
FHP	2370#

Top Coconino Sandstone - 4903' (Schlumberger)

DST #6 4887 - 4950' 5/8" b. h. choke, open 60 minutes; shut-in 30 mins. weak blow, died in 4 minutes. Recovered 5' drilling mud.

IHP	2455#
IFP	0#
FFP	0#
SIP	0#
FHP	2415#

DST #7 4968 - 5125' 5/8" b. h. choke, open 120 minutes; shut-in 30 minutes. Eak blow continuing throughout test. Recovered 225' of gas-cut mud. CO_2

IHP	2515#
IFP	0#
FFP	80#
SIP	1565#
FHP	2455#

DST #8 5103 - 5202', 7/8" b. h. choke, open 60 minutes, shut-in 20 minutes tool opened w/very weak blow, and died. Recovered 15' of drilling mud.

IHP	2595#
IFP	10#
FFP	10#
SIP	595#
FHP	2595#

DST 9A 5191 - 5254, Tool opened w/ oss mud in hole. Tool reopened w/loss of mud. Packer seat failed to hold. Misrun. Recovered 850' of drilling mud.

DST #9B 5183 - 5254' - Tool opened w/loss of mud in hole. Tool replaced reopened w/loss of mud. Packer seat failed to hold. Misrun Recovered 930' of drilling mud.

DST #9C 5173 - 5254 - Tool opened w/loss of mud in hole. Packer seat failed to hold. Misrun. Recovered 710' of drilling mud.

DST #9B 5178 - 5254 - ½" b. h. choke, tool opened w/loss of mud in hole. Packer seat failed to hold. Misrun.

DST #9

5104 - 5254 - ½" b. h. choke, open 14 hours; shut-in 30 min. fair blow throughout test. Fluid (water) rise of 3502' in hole.

IHP	2515#
IFP	1000#
FFP	1550#
ISIP	400#
FSIP	1100#
FHP	2515#

Equity Oil Company
#3 Mounds
18-15S-12E
Carbon County, Utah

Spud: 5/2/59

Set:

A 457'

Samples Begin Near Top of Ferron SS

40 - 50	Sandstone-Lt. gry. "salt & pepper", w/common interbed, yellow-buff, generally fine gr. well-sorted, calc. cement, w/min. dk. gry. to blk. shaly sandstone strks, and glassy guartzitic strks. Trc. fibrous gypsum and wh. pulv. gyp.
50 - 70	Samples missing.
70 - 80	Sandstone - as above.
80 - 90	Samples missing.
90 - 110	Sandstone - Lt. gry. "salt & pepper", fine gr., hd and dse, w/abundant calc., shaly cement. Common guartzitic strks.
110 - 140	Samples missing.
140 - 150	Shale - Dk. gry. to blk., soft, waxy, bentonitic and commonly sandy, w/min. lt, gry, "salt and pepper" sandstone stringers. Trc. fib. gyp.
150 - 160	Shale - as above, transit. to shaly sandstone.
160 - 190	Sandstone - Lt. gry. "salt & pepper" and dk. gry. shaley w/ common intercaluted sandy shales.
190 - 220	Shale - Dk. gry. to blk, commonly sandy, waxy, bentonitic, w/abundant strks. Lt. gry. to whitish, micu. bentonite. Trc. lt. gry. Salt and pepper sandstone stringers.
220 - 230	Shale - Dk. gry to black., crsly aren., bent., soft, w/equal parts shaly crs. gr. friable sandstone. Trc. bent. strks.
230 - 250	Sandstone and shale, as above, but finer gr. , trc. fibrous gyp.
250 - 300	Shale -DK. Gry. to blk., fissile, soft, sub-waxy to silty, common calcite veinlets. Trc. wh. bent.
300 - 310	Shale - Dk. gry. to blk., fissile, soft, sandy, calc., w/common calcite veinlets.
310 - 340	Shale - As above, med. hd., less sandy w/min. bent. and calcite.
340 - 360	Shale, as above, med. hd. calc. trc. pyrite.
360 - 370	Sandstone - Dk. gry., calc., shaly, fine to med. crs., angular to sub-round, mica., hd. and dse, w/min lt. gry. quartizitic strks. and blk. sandy strs. intercalcated. Trc. pyrite; common bentonite and calcite.

f-64

370 - 410 Shale. Dk. gry. to blk., med. hd., calc. sandy, in part. Pyritic.

410 - 420 Bentonite - Lt. gry., med. gry., and whish., finely mica, and rare sand grs., soft, waxy.

Top Dakota Sandstone - 420'

420 - 430 Bentonite - as above, commonly sandy, w/min. interbed. bent. sandstone strks.

430 - 440 Sandstone and Bent.- Lt. gry. to whish, fine to crse., poorly sorted, w/small blk. chert. grs., abundant bent. cement and interbed sandy bent.

440 - 450 Conglomerate - Sandstone and bentonite as above, w/congl. pebbles of chert and qtz., common blue-grn. and dk. gry strs. intercalcated, gyppy and pyritic.

Top Cedar Mountain Fm. - 448'

450 - 470 Bentonite - Med. to lt. gry., w/min. blue-grn., min. lge blk, chert pebbles and whish., sandy strks.

470 - 480 Bentonite - Lt. Gry., med. gry., and grnish, gry, soft, waxy, w/ common blk. chert pebbles, and buff, silic., calcite stringers.

480 - 510 Samples missing.

510 - 520 Shale - Maroon to purp., sli., calc., soft, dull, w/equal interbed dull grn. wxy. sh., all finely mica w/rare sand grns.

520 - 530 Samples missing

530 - 540 Shale - Generally pale grn., calc., bent., waxy, w/common interbed. pale grn. argill. ls. stringers, and min. mar. shs, w/rare sand grs.

540 - 550 Samples missing.

550 - 560 Shale - as above, w/common mar. shale interbed and mottled. Trc. wh. calc. sandstone.

560 - 580 Samples missing.

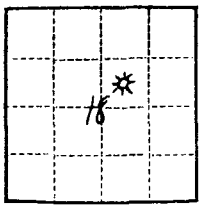
580 - 600 Shale. as above, w/common interbed pale grn. to whish, fine to crs. poorly sorted, calc. sandstone.

600 - 610 Shale - Mar. to purp., w/ min. pale grn. sh. intercalated sli. cherty.

610 - 620 Samples missing.

Budget Bureau 42-R358.3.
Approval expires 12-31-55.

Form 9-331a
(Feb. 1951)



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ORIGINAL FORWARDED TO CASPER

Land Office Salt Lake City
Lease No. U-06099
Unit Not Unitized

JUN 23 1954

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF
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NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY
NOTICE OF INTENTION TO ABANDON WELL	Subsequent Report of setting Surface Pipe X

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

April 10, 19 53

Well No. 3 is located 1980 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 18

NE 1/4 Sec. 18 (¼ Sec. and Sec. No.) | 15S (Twp.) | 12E (Range) | SLM (Meridian)

Mounds-Farnham Area (Field) | Carbon (County or Subdivision) | Utah (State or Territory)

The elevation of the derrick floor above sea level is ..... ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

4-9-53: Set 10-3/4" OD J-55 surface casing at 457 feet from surface. Cement was circulated to surface. 220 sacks

Casing string consisted of 12 joints of 32.75# and 2 joints of 40.50#. A Halliburton shoe and float were used.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company EQUITY OIL COMPANY

Address 806 Utah Oil Bldg.

Salt Lake City, Utah By [signature]

Approved 6-23-54 Title Vice President

[signature]
District Engineer

U. S. GOVERNMENT PRINTING OFFICE 16—8437-5

620 - 630 Shale - Mar. to pup., w/trc pale grn. argil. ls. stringers.

630 - 640 Samples missing.

640 - 650 Shale - as above.

650 - 660 Shale - As above, w/trc. pale grn. to whish, calc., sandstone.

660 - 680 Samples missing.

680 - 700 Shale - Var., pupr., mar., choc., and pale grn., calc., gyppy.

700 - 720 Shale. Var., as above, w/equal amountof pale grn. and buff fresh-water ls. Abundant varicolored ls. conglom. pebbles. Trc. pyrite.

720 - 750 Shale. As above, w/trc. conglom. pebbles and whitish strks.

750 - 760 Shale. Var., as above, w/equal maounts pale grn.,fresh water, argil. ls., sandy, in part.

760 - 780 Shale. Faded purple to mar., w/min interfing. pale grn. and buff argil. ls.

780 - 790 Shale - as above, w/trc. pale grn. to whish, fine, calc., sandstone.

790 - 810 Shale - Faded purp., w/trc. blue-grn. mottling, and pale grn. argil. ls.

810 - 820 Shale - as above, w/min blue-grn. mottling and trc. buff, fresh water ls. and calcite veinlets.

820 - 840 Shale, as above, w/carbonates increasing to 30%.

840 - 855 Shale - Fafed purp., w/min blue-grn. shs. and ls. trc. calcite veinlets, anc columnar calcite. All calc.

855 - 870 <u>Top Buckhorn Conglomerate - 855'</u>

855 - 870 Sandstone - Wh., fine to crs. and gonglomeritic, calc., w/commonglassy silic. sones. Abundant orange and varicolored chert grs. and pebbles. All hard and dense.

870 - 880 Samples missing.

880 - 900 Shale - Fafed purp., w/common interbed. palegrn. calc. shales and argil. ls. trc. chert grs. and wh. congl. sandstone, as above.

900 - 910 Sandstone and shale. Lt. gry., pale grn., and whish., fine to crs., w/strks of conglom., calc., w/common vari. chert grns and equal parts of chec., faded purp., and pale grn. shale.

910 - 920 Sandstone and shale - as above, but commonly crs. to conglom. Trc. wh. pulv. gyp.

920 - 930 Shale - gen. purp., w/common var. intercalated and common sandstone and ls., as above. Abundant var. chert pebbles. Conglom. and detrital. material.

Rounds #3 - Samples -

930 - 940	Shale. As above, highly calc. w/var. sandstone, and ls., as above. Abundant var. chert pebbles. Conglom. and detrital materials.
940 - 950	Limestone. Pale grn. argil, sandy, impart, w/common sandstones and var. shs., as above. Abundant chert conglom. pebbles, a detrital zone.
950 - 960	Chert. Amber to buff w/min vari. w/ approx. 40% ls., ss. and shales, as above. Trc. blk. hydro-carb. stain (inchert) and wh. pulv. gyp.
960 - 990	Chert. As above, w/shs., ss., and ls. decreasing to approx. 10%.
990 - 1030	Shale - General faded purp. w/interfing ls., ss, and shs., as above, @ approx. 30%.
1030 - 1040	Shale. Faded purp. and mar., w/common interbed. lt. gry.-grn. subwaxy sh., fine to very crsly aren. w/min shaly sandstone strks. Common vari chert pebbles and crs. grs.
1040 - 1050	Shale - As above, sli. calc., in part, w/trc. gry.-buff ls. stringers.
1050 - 1060	Samples missing.
1060 - 1070	Shale, as above, w/sandstone strks, increasing to approx. 10%.
1070 - 1090	Shale - Var., faded purp., mar., lt. and med gry-grn., aren, in part, w/min. sandy strks and ls. striners. Min. chert.
1090 - 1100	Shale. Var., as above, more common ly. lt, and med. gry-grn. tones. Common vari. chert pebbles.
1100 - 1110	Shale. Var., but commonly faded purp. to mar., w/interbed. sandy shs., and sli., calc. sandstone strks., and ls. stringers, as above. Trc. silic mat. and anyh.
1110 - 1120	Shale. Var., w/equal parts of purple and gry-green shades, w/ gry-grn. shs, becoming harder and dolo.
1120 - 1130	Shale, as above, w/min. pale grn.-gry. and lt. gry. to whish sh. intercalated, sli. calc.
1130 - 1140	Shale. Lt. gry., med. hard., calc. dull, w/ rare fine sand grs to trc. of sandy sh. trc. faded purp., choc., and dull grn. sh.
1140 - 1150	Shale. Lt. gry., as above, w/trc. off shade, grn., fine to crs., poorly sorted, shaly, calc. sandstone strks.
1150 - 1160	Limestone - Argil. dull gry. grn., sandy, in part, w/common interbed., faded purp., choc., and pulc grn. calc. shs., common chert pebbles.
1160 - 1170	Sandstone. Lt. grnish-wh., very hd., dse, and limy, w/equal interbed ls, sandy ls., and vari, shs., as above.
1170 - 1180	Limestone - General, dull gry., grn., and variegs., sandy, impart, w/ common interbed var. calc. shs. and pale grn. calc sandstone, as above Common var. chert pebbles.

1180 - 1190	Shale - Lt. gry, dull, earthy, finely aren., sli. calc. w/ [illegible] interealated faded purpl, shec., and pale green shs. [illegible], chert.
1190 - 1200	Shale - Var., w/min. interbed, gry-buff, very silic., cherty ls., and min var. argil. ls stringers, finely aren., in part.
1200-1210	Shale Faded purp. w/ equal parts, grn-gry calc, sandy shales and argil. ls., min lt. gry. calc. sh. w/common chert pebbles. Trc. pale grn. sandstone.
1210 - 1230	Shale - as above, w/general increase of purp tones.
1230 - 1240	Shale - Gry-grn. w/min. faded purps., feneral increase in carbonates.
1240 - 1250	Limestone. Angil., med. grn.-gry., gritty, w/common chert grs. Trc. buff, dse, ls.
1250 - 1260	Shale - Var., calc., w/common var. argil. ls., sandy or gritty zones. Trc. pale-grn. brecciated sandy ls. and wh. calcite veinlets.
1260 - 1270	Shale - as above, w/equal amount of gry-grn argil ls., becoming quite hard and dse.
1270 - 1290	Limestone - Med. gry.-grn., argil, sinely aren. to gritty, in part w/trc. faded purp sh. and lt. gry, sandy, brec. ls. Trc. calcite veinlets.
1290 - 1350	Shale - Var. calc, w/interbed ls., ss, and shs, as above. Common vari chert.
1350 - 1360	Shale - Var. calc, w/interbed var. argil., ls. gritty to finely aren., in part, w/50% pale-grn. to whish fine to crs. poorly sorted sandstone, gyppy cement. Common sh. anhy. or gyp. and vari-chert pebbles.
1360 - 1370	Shale - as above, w/min sandstone strks., as above. Abundant vari. chert conglom. pebbles.
1370 - 1380	Limestone - Med. gry-grn., dsc., argil, gritty to finely, aren. w/min gry-buff dse ls stringers. Trc maroon sh. and chert.
1380 - 1390	Limestone- as above, w/ abundant wh. chalk interbed.
1390 - 1420	Limestone - as above, w/min. cherk and min. faded purp. sh.
1420 - 1430	Limestone - as above, w/min chert and trc faded purp. sh.
1430 - 1440	Limestone - as above, w/min. cherk and faded purpish gritty zones becoming more definite grading into min. pale grn to whish calc. sandstone cherty.
1440 - 1460	Shale - Var., calc., gritty to finely aren., in part, w/ common chert grs. and pebbles, min. argill ls. stringers. Trc. wh. calcite veinlets.

1460 - 1470	Shale - as above, w/gry-grn. argil ls. increase to approx. 30%.
1470 - 1480	Limestone - Grn. gry., argil, chalky, med. hd., dse., gritty to finely aren., in part w/min. intercal faded purp and pale grn. shs. Trc. fine to crs. pale grn. sandstone, sherty.
1480 - 1490	Shale - Var. w/ interbed ls., as above.
1490 - 1500	Shale - Var., as above, chalky, w/general increase in carbonates.
1500 - 1510	Shale - Var., as above, w/30% grn.-gry. and buff argil ls.
1510 - 1520	Shale - Var., as above, w/ 30% ls. as above, but commonly silic. and cherty.
1520 - 1540	Shale - Var. w/ general increase of faded purps. Argil ls. Decrease to approx. 10%.
1540 - 1550	Shale - as above, w/trc. pale-grn, calc sandstone, fine to crs. w/ common vari. chert grs.
1550 - 1560	Samples missing.
1560 - 1570	Sandstone - Wh., generally crs. and conglom., w/abundant vari. chert grs. and pebbles, very calc, w/min. fine gr. strks pale grn. calc sandstone. Trc. grn-gry argil. ls., and var. shs.
1570 - 1580	Samples missing.
1580 - 1590	Limestone - Med. gry., argil, gritty, w/common interbed var., calc. shs., calc sandstones. Trc. wh. congl. sandstone, as above.
1590 - 1600	Shale - Var., gen., pup., w/common interbed grys "off shade" grn. shs., argil, ls. and min. sh. congl. sandstone, as above, abundant chert pebbles.
1600 - 1610	Shale - as above, w/wh. conglom. sandstone, absent, common chert pebbles.
1610 - 1630	Shale - as above, trc. wh. congl. sandstone. Common chert pebbles.
1630 - 1640	Samples missing.
1640 - 1700	Shale - Var., gen. purp. w/min choc., w/ common intercaluted gry, grn., and buff calc. shs., and argil. ls., and min. pale grn. calc. sandstone. Trc. wh. congl. sandstone. Min. chert.
1700 - 1720	Shale - Gen. choc. brn., calc., finely mica, w/commong interbedded calc. var., shs. and s/stones and argil ls., mica, in part. Min. fine, calc., lt. rdish. brn. sandstone strks. Cherty. Trc. gyp.

1720 - 1750 — Shale - as above, w/sli. increase of wh. pulv. gyp. ox anhy.

1750 - 1780 — Shale - Choc. grn., calc., finely mica, silty to finely aren. in part, w/common intercalated, gry, grn.-gry, and faded purp. shales, min. var. slstne. Trc. gry-argil ls., pale grn. calc., shaly sandstone and chert. Trc. gyp.

1780 - 1790 — Shale - as above, w/common wh., and rd. stained pulv. gyp. or anhy. Gen. increase of chert.

1790 - 1800 — Shale - as above, becoming dk. brn., w/gen. increase of carbonate content, more commonly silty to sandy, w/var. shales, above. Common gry-grn., argil. ls. Min strks pale-grn and wh. congl. sandstone. Chert and gyppy.

Top Curtis Sandstone - 1800'

1800 - 1890 — Sandstone. Lt. grn. sh.-gry, fine to crs., poorly sorted, calc., friable, w/common blk chert and lt grn. chlorite grs, trc. mica, w/min interbed. var. shs., trc. buff ls, and common chert.

1890 - 1910 — Sandstone - as above, w/common wh. pulv. gyp.

1910 - 1920 — Sandstone - Lt. gry., as above, w/ abund, vari. chert.

1920 - 1930 — Sandstone - as above, w/an equal amount of var shs. and dk. gry-grn, argil. ls., commonly gritty, common wh. pulv. gyp. and min. chert.

1930 - 1940 — Shale and argillaceous limestone. Var., silty to gritty, in part, w/min. sandstone, as above. Trc. wh. gyp., wh. fibrous calcite, and a blk. "gilsonite-like" hydrocarb. (Cavings?)

1940 - 1950 — Sandstone - Lt. grnish-gry., fine to crs., calc., w/abund. blk. chert and dk. grn. chlorite grs w/interbed var. shs. and argil. ls., above. Min. whi gyp.

1950 - 1960 — Sandstone - as above, w/var. shs., as above, w/common wh. pulv. gyp.

1960 - 1980 — Sandstone - as above, w/common whi gyp and vari chert.

1980 - 1990 — Sandstone - as above, w/approx. 30% dk. gry-grn. argil ls. and min var. shs. Abund. wh. pulv. gyp and vari chert.

1990 - 2015 — Sandstone - as above, gen. very crs. to congl. w/interbed. var. argil. ls. and shs., as above. Abund. gyp. and chert. Trc. blk hydro-carb.

Top Entrada Sandstone - 2015'

2015 - 2040 — Sandstone - Lt. rdish-brn. to orange, fine to med. crs., poorly sorted, shaly, calc. cement, med. hd. dse w/ rare blk. chert grs., w/equal interbed. var. gritty calc. shs, argil. ls. and silstones. Abund. wh. and pink stained pulv. gyp. and common var. chert (Canbing?)

2040 - 2070	Shale and argil. limestone - Var., gritty to finely aren., in part, w/common interbed. orange sandstone, as above, common wh. pulv. gyp., chert, and min. curtis sandstone. (Caving?) Trc. blk. "gilsonite-like" hyrocarb." Trc. dissem. pyrite.
2070 - 2080	Shale and argil. limestone, as above, w/common orange sandstone, as above. Abundant wh. and pink-stained gyp., and common vari. chert and congl. qtz. "floater" grs.
2080 - 2100	Shale and argil. limestone. As above, w/decrease of wh. pulv. gyp. and increase of silic. material.
2100 - 2110	Shale and argil. limestone, as above, w/min. wh. pulv. gyp and vari. chert.
2110 - 2120	Shale - Dk. brn., finely mica., sli. calc., med. hd., silty to finely aren., in part, w/common interbed var. shales, argil ls and trc. orange sandstone. Min gyp. and chert. Trc, curtis sand. (Cavings?)
2120 - 2150	Sandstone - Lt. orange, calc., w/common interbed. argil. ls., and shs. common wh. gyp. and abund. chert and silic. ls. Trc. curtis sandstone (Cavings?)
2150 - 2170	Limestone - Dk. grnish-gry, and faded purp., argil, hd. ds., silic, in part, w/common intercal. calc. Var. shs., common lt. orange sand and wh gyp. Abundant vari. chert pebbles. Trc. wh. calcite frac. fill. (Cavings?) Trc. pyrite.
2170 - 2200	Limestone and shale, as above, w/common lt. orange sandstone, as above. A detrital zone w/pale grn. gtsitic, congl. sandstone strks. Abundant vari. chert pebbles, common wh. gyp. trc. wh. calcite frac. fill.
2200 - 2210	Limestone and shale, as above, w/abundant vari. chert pebbles Min. light orange sandstone becoming dk. brn. transit to sandy sh. A detrital zone (Cavings?)
2210 - 2220	Limestone and shale, as above, w/trc. lt. orange and dk. brn. sandstone. Commonly cherty, silic, and gyppy.
2220 - 2230	Sandstone - Lt. orange and brn., fine to crs. and congl., gyppy cement, w/equal choc., faded purp., and gry. shs interbed. Min. argil ls., and abund. vari chert pebbles, and wh. pulv. gyp.
2230 - 2270	Shale - Var., calc., gritty to aren., im part, common argil ls., and common orange sandstone, as above. Common chert and min. gyp.
2270 - 2280	Sandstone and shales, as above, in equal amounts.
2280 - 2290	Sample missing.
2290 - 2300	Sandstone - Lt. orange and brn, fine to crs., poorly sorted, sli. calc., gyppy cement, w/approx. 30% var. shs and ls., as above. Common vari. chert pebbles and pulv. gyp.
2300 - 2310	Shale. Var., calc, gritty to sandy, in part, w/min interbed. Sandstone, as above. Min argill, ls., common gyp. & chert

2310- 2330	Shale - Var., as above, w/increase of argil. ls., min. orange sandstone and strks. pale-grn. congl. sandstone.
2330 - 2350	Sandstone. Lt. orange to rdish-brn, fine to med., subround grns, good double sorting, calc., shaly cement, common gyp. Trc. chert and var. shs.
2350 - 2370	Sandstone, as above, w/thin choc., mica, shs strks.
2370 - 2390	Sandstone, as above, commonly cherty.
2390 - 2400	Sample missing.
2400 - 2420	Sandstone. Lt. orange to rdsh - brn., fine to med., subround grns., very shaley, sli. calc., gyppy, min. choc. shs. intercalated.
2420 - 2460	Sandstone, as above, w/min. var. shs and gry. argil. ls. Trc. chert.
2460 - 2475	Sandstone, as above, w/min. whish, gry and pistachio grn. congl. sandstone.

Top Carmel Formation - 2475'

2475 - 2480	Limestone - Med. gry and common lt. gry-grn., silty to fine aren. and mica., hd., dse., w/com. wh. sugary anhy., silic., in part. Trc. chert
2480 - 2510	Shale - Var., sli. calc., finely aren. to congl., in part, w/min. gry., and var. argil. ls., gritty to silty w/common strks var., fine to congl. sandstone. Trc. pyrite, chert, and wh. anhy., A detrital zone.
2510 - 2530	Siltstone. Lt. gry-grn., calc., trnasit to silty, finely aren. ls., all commonly sandy, w/thinn strks lt. gry-grn. calc., sandstone, and med. gry. dse ls., all finely mica common var. shs., congl. sandstone and chert. Trc. pyrite & gyppy.
2530 - 2570	Limestone - med. gry-dense, and lt. gry-grn., silty to finely aren., and mica w/common interbed. var. shs and sandstones, as above. All anhydritic.
2570 - 2590	Dolomite - Dk. grn.-gry and lt. gry., w/abundant wh. suer. anhy. mottling. silty to finely aren and mica, in part, common chert. Trc. rdish-brn. sandy siltstone and choc. sh.
2590 - 2610	Dolomite, as above, but commonly sandy w/abund. wh. anhy. shs, and chert as above.
2610 - 2630	Dolomite - sandy, as above, becoming sli, calc., w/abund. whd anhy., min rdish-brn., sandstone, and shs, w/min. strks. whish., glassy quartzite med to c rs zone.
2630 - 2640	Dolomite, as above, sli. calc., w/min. quartizite stringers, rdish-brn. sandstone and choc., shs., as above, w/abundant anhy. mottled and interbed, cherty. Trc. dk. gry, dolo. shale partings

#3 Navajo Samples - [redacted]

2340 - 2650 — Limestone, gen. dk. gry., hd., dse, finely mica, gritty, in part w/common anhy. mottling, Trc. rdish-brn, sandstone, dk. gry. calc. sh., and chert.

2650 - 2670 — Limestone, as above, w/common inter. fing. Lt. and dk. grn. gry., sandy dolo., common rdish brn sandstone and abundant wh. anhy., interbed and nottled. Common chert.

2670 - 2680 — Anhy. and dolo., as above, sec. reworked.

2680 - 2700 — Anhy. and dolo., as above, w/common rdish brn. silty fingr, sandstone, shaley.

2700 - 2710 — Samples missing.

2710 - 2720 — Dolomite - Lt. and dk. grn.-gry., gritty as above, w/com. rdish brn. sandstone, abund. wh. anhy. and com. chert.

2720 - 2730 — Limestone. Dk. gry, anhy mottled, w/thin grn-gry, sandy dolo. strks., common rdish brn. sandstone and dk. gry. dolo. sh. partings, cherty.

2730 - 2780 — Limestone and dlo., as above, but commonly sandy, w/thin strks. whi. quartzite.

2780 - 2835 — Limestone - Dk. gry. ds., sandy, w/equal amount of lt. gry. calc., fine gr. Sandstone. All anhydritic. Trc. rdish-brn. sandy siltstone, drty gry. crs. gr. qtzitic strks.

Top Navajo Sandstone - 2835'

2835 - 2840 — Sandstone - Cream, buff and dirty gry., fine to crs., subang. to well round frosted, poorly sorted grs., sli. calc., mica, w/rare orange chert grs., generally hd., dse., quartzitic to silic., w/common interfing. dolo, redement ls. strings, sandy in part, gyppy, cherty. Trc. blk. hydro-carb. specks.

2840 - 2850 — Sandstone, as above, w/trc. choc. sh. partings.

2850 - 2860 — Sandstone, as above, w/min. crs. to congl. strks., abund. blk. hdro-carb specks.

2860 - 2869 — Sandstone, as above, w/common lt. gry. and choc. shs, gry. dolo. ls. stringers, wh. pulv. gyp., and chert. Trc. blue grn. sh. and abund. blk. hydro-carb. specks.

DST #1 Open 40 mins., shut in 15 mins., gas to surf. (CO2) in ½ min., blk. watery sulphur cut drilling mud in 27 mins. Recovered 20' gas and mud cut sulphur water.

I.H.H.	1405#	F. H. H.	1405#
I. F. P.	470#	Static pressure guage on 2" line	270#
FFP	650#		
S. I. P.	1006#		

2869 - 2890 — Sandstone - as above, w/shs. and dolo. stringers increase to 30%. Min whit. anhy.

2890 - 2960 — Sandstone & sh., as above in equal parts, pyritic.

2960 - 2980 Sandstone, as above, w/shs, as above reduced to 30% of total.

2980 - 3000 Sandstone, as above, w/tre. of shs., as above.

3000 - 3010 Sandstone, wh., cream, buff, and dirty wh., fine to crs. and congl., subang to well rounded, frosted grs., pyritic, common interstit. gyp w/abund. blk. hydrocarb. specks; w/common gry dolo., silty, finely mica and aren, in part. Tre. chert and olive green shs.

3010 - 3030 Sandstone, as above, w/gry. dolo. red. to a tre. common wh. pulv. gyp and sugary anhy. Tre. chert and pyrite.

3030 - 3040 Samples missing.

3040 - 3050 Sandstone, as above, gen hd., and dse w. common softer, friable strks. common wh. pulv. gyp.

3050 - 3060 Sandstone, as above, w/gry dolo. partings, as above. Common cherty congl. strks.

3060 - 3100 Sandstone, as above, but generally congl. Tre. rdish-brn., sandy siltstone, choc., and faded purp. shs. Tre. olive grnish.

Top Kayenta (?) Formation - 3100'

3100 - 3120 Sandstone - cream, buff, and min. lt. gry., fine to crs. and congl., poorly sorted, gyppy, pyritic, w/dolo. cement and min. cream sandy dolo. stringers. Tre. med gry. dolo. All hd. and dse.

3120 - 3130 Sandstone, cream, whish, med. gry and grnish-wh. dolo., fine to crs and congl., commonly quartzitic and silic, very hd, dse. gyppy and pyritic. Tre. grnish-gry, dolo., and choc. shs.

3130 - 3150 Sandstone, as above, w/sli increase of choc., faded purp., and lt. gry. gritty shs.

3150 - 3160 Sandstone, as above, but generally crs. and friable, w/intercalated shs., as above.

3160 - 3175 Sandstone, as above, but generally very crs to congl. and more commonly hd. and dse w/min friable, w/common intercalated shs. and dolo., as above. Pyritic and gyppy.

Top Wingate Sandstone - 3175'

3175 - 3180 Sandstone, cream, lt. orange, whish, and pistachio-grn. mottled, fine to very crs., had. dse, silic. to quartzitic, sli. calc., in part, w/min. gyp., common pyrite, and trc. choc. silty shs.

3180 - 3190 Sandstone, as above, varicolored, w/common intercalated var. shs., ls., and dolo.

3190 - 3220 Sandstone, as above, w/abund. fine orange chert frs., w/interbed. var. shs, ls, and dolos. All finely mica and pyritite. Common very crs to congl. strks.

3280 - 3290	Sandstone, as above, but commonly friable, w/interbed, shs, ls. and dolo., as above. Common wh. sug. anhy.
3290 - 3270	Sandstone, as above, w/min. interbed. var. shs, ls and dol. sandstone is generally hd, dse, and silic.
3270 - 3280	Sandstone, as above, but commonly firable strks., abund. wh. pulv. gyp and anhy. Trc. of shs, ls, and dolo, as above.
3280 - 3290	Samples missing.
3290 - 3300	Sandstone, as above.
3300 - 3330	Sandstone, cream to buff, generally med. crs. to very crs., friable, w/common fine gr. and silic. strks. Min. gyp. and pyrite, no shs.
3330 - 3340	Sandstone, as above, w/abund. sand-generally firable w/min. hd. strks.
3340 - 3360	Sandstone, as above, but generally hder and more consolidated less firable sand grs.
3360 - 3370	Sandstone, as above, w/min. intercalated var. shs. and dolo.; common very crs. to congl. strks.
3370 - 3380	Samples missing.
3380 - 3390	Sandstone, cream to buff, fine to crs. and congl. hd., dse. sli, calc., in part, trc. pyrite and mica, gyppy, w/min. intercalcated var. shs.
3390 - 3400	Sandstone. Lt. orange to rdish-brn., generally very fine gr, w/min. crs. strks, as above, becoming lt. orange to rdish-brn, increase to choc. shs.
3400 - 3420	Sandstone. Lt. orange to rdish-brn. generally very fine gr. w/min. crs strks., very hd., dse., silic., in part, finely mica, gyppy.
3420 - 3460	Sandstone, as above, w/common crs. gr. strks.
3460 - 3470	Samples missing.
3470 - 3500	Sandstone, cream and lt. orange, gen. crs. w/common very fine grs., w/min. choc. and var. shs. Trc. dolo. Trc. chert.
3500 - 3510	Sandstone, as above, but commonly softer and more firable.
3510 - 3520	Sandstone, as above, but hder, and consolidated, quartzitic to silic., in part. Trc. chert.
3520 - 3530	Sandstone, as above, w/common var. shs. and dolos.
3530 - 3540	Samples missing.
3540 - 3560	Sandstone, as above.
3560 - 3570	Sandstone, as above, w/min. choc. shs.

3570 - 3585	Sandstone, as above, w/common var. shs. and dolo. stringers.
	Top Chinle Formation - 3585'
3585 - 3600	Shale, Var., generally med. gry. w/common lt. gry., gry-grn, purp., olive grn. and a trc. mustard yellow sli. calc, w/ rare med. sand grs. Trc. pyrite and var. chert pebbles.
3600 - 3630	Shale, Var., as above, w/common sh. pellets, Trc. wh. gyp. and fine to crs. wh. sandstone.
3630 - 3640	Shale. Var., as above, but very calc. w/common argil. gry-grn. ls. stringer, pyritic, w/common on wh. pulv. gyp. grnish-wh. sandstone, and abund. chert pebbles and clay pellets.
3640 - 3650	Shale. Var. but gen. faded purp. commonly silty, w/sandstones and ls., as above. Trc. chert.
3650 - 3670	Shale Pellets, var., calc. of very uniform size, w/approx. 30% grnish-wh. limey sandstone, med. hd., dse, intercalated gyppy Trc. chert.
3670 - 3690	Shale. Var., as above, w/abund. sh. pellets, sandstone etc., as above. Common var. chert pebbles.
3690 - 3700	Shale. Var., as above, w/ grnish-wh. limey sandstone increasing to approx. 50% gyppy.
3700 - 3710	Shale, var., as above, w/sandstone, as above, w/wh. pulv. gyp. and anhy. increasing to approx. 25%
3710 - 3730	Shale, as above, w/min. wh. pulv. gyp. and anhy. commonly silic. and cherty.
3730 - 3735	Shale, as above, w/common lt. orange, sli. calc., sandy siltstone, gyppy, w/approx. 10% wh. pulv. gyp. cherty.
3735 - 3741	Shale, as above, w/general increase of chert. Lt. orange siltstone becoming very silic.
	Top Shinarump Zone - 3741' (?)
3741	Losing mud.
3741 - 3750	Siltstone - Lt. orange, sli. calc., gyppy, transit. to rdish. brn. silty shale, w/common interbed. var. shales and argil. ls. stringers. Common chert, and pulv. gyp. Trc. mustard claystone.
3750 - 3765	Siltstone and shale, as above in 50/50 amounts, w/var. sls. ls., and anhy., as above. Trc. mustard claystone. Cherty.
3765 - 3780	Shale. Rdish-brn., very calc, silty transit to argil ls., w/ lt. orange silstone (10%) intercalated, w/min. var. shs. and ls. commonly cherty and anhy. Common yellow chert. trc. sandstone, pyrite and mustard claystone.
3780 - 3785	Shale, rdish brn, as above, becoming more silty, hd., dse., and very calc.

3785 - 3787 [illegible], as above, w/common mustard [illegible]ler mottling, silic, in part.

[illegible] Formation - 3787'

DST #2 Open 20 mins. did not shut in - no blow.

I. H. H.	1750#	S. I. P.	0#
I.F. P.	0#	F. G. H.	1750#
F. F. P.	0#		

3787 - 3800 Shale, var., calc., w/common rdish-brn. siltstone, min. fresh water ls., trc. wh. sandstone, w/common var. ls. modules and clay pellets, all, finely mica. Trc. wh. anhy. cherty.

3800 - 3810 Shale, as above, w/trc. heavily mica strks. along parting plans.

3810 - 3900 Shale, Var., as above, w/common chert, grit, and abund. detrital material.

Core #1 4185-4209, Rec. 24'

4185 - 4197.5 Siltstone, Med. grnish-gry., highly mica, sli. calc. hd., dse., w/min. calc to filled, hair-line, fractures. Trc. glauc. and paper-thin, abund. mica, med. gry. sh. partings. No. shows!

4197-5- 4198.5 Shale, choc. brn., silty, finely mica, hd., and dse.

4198.5 - 4199.5 Shale. Med. grnish.-gry. dolo. silty, finely mica, w/paper thin, platty, grnish-gry., highly mica, siltstone partings.

4199.5 - 4201 Shale. Choc. brn., very silty, highly mica, as above.

4201 - 4202.5 Siltstone and shale. Med. grnish-gry. and choc. brn. interbed., w/sucrosic wh. and rdish-brn. anhy. stringers and mottling.

4202.5 - 4204.5 Siltstone and shale. Med. grnish.-gry., mica, and dk. gry.-grn., dolo., good fissility, thinly interbed.,w/common highly mica shale partings.

4204.5 - 4209 Shale, Choc. brn. and med. grnish.-gry., dolo., silty highly mica., as above.

Core #2 4209 - 4266' Rec. 57'

4209 - 4211 Siltstone and shale. Med. grnish.-gry., as above, w/common wh. sucrosic anhy. mottling. Trc. blk. "gilsonite-like" hydrocarb. inclusions

4211 - 4215 Siltstone and shale, as above, thinly interbed. w/min. wh. anhy. stringers.

4215 - 4217 Siltstone - Gry.-brn., highly mica, dolo. hd. dse.

[illegible]

4217 - 4219 Siltstone, med., graish-gry., dolo. as above, w/paper thin, darker graish-gry, dolo. shale partings.

4219 - 4223 Siltstone and shale. Choc., brn., highly mica, w/common gry.-grn. mottling and mica shale interbedding.

4223 - 4230.5 Siltstone and shale in choc., brn. and dk. brnish-bry., platty, intercalated discontinuous lenses, mica siltstone.

4230.5 - 4231.5 Siltstone, as above, discont. lenses, giving a brnish-gry. mottled appearance.

4231.5 - 4236 Siltstone and shale, as above, mottled, but more commonly interbed.

4236 - 4240 Shale. Choc.-brn., silty, mica, w/lt. gry.-grn., dolo, glauconitic, highly mica siltstone thinly interbed.

4240 - 4241 Siltstone. Lt. gry. and grn., highly calc., mica, gloac. Crsly xstall. w/thin dull grn. silty, dolo shale, lenses, hd. and dse.

4241 - 4247 Shale. Choc. brn., and gry. brn, interbed w/min gry.-grn. shale, partings.

4247 - 4247.5 Siltstone. Lt. gry.-grn. dolo., mica, glauc. hd. and dse.

4247.5 - 4253.5 Shale. Choc. brn., silty, finely mica, as above.

4253.5 - 4254.5 Siltstone. Lt. gry.-grn., dolo., as above. No shows!

4254.5 - 4265.6 Shale. Choc.-brn., mica, x/xstal anhy. veinlets, and interbed. Lt. gry.-grn. and gry.-brn., mica, glauc., siltstone lenses giving mottled appear.

4265.6 - 4266 Siltstone. Lt. gry.-brn., mica, dolo., hd. and dse. No shows.

Core #3 - 4266-4315. Recovered 49'.

4266 - 4285.5 Shale, Choc.-brn., mica, silty, w/min. interbed. Med. gry-grn, dse, dolo. shale, finely mica, silty partings, w/trc. wh. anhy. veinlets.

4285.5 - 4315 Siltstone. Lt. gry.-grn., dolo. highly mica, hd. dse. w/ common sugary anhy. veinlets and mottling, w/trc. choc, brown, silty, mica, shale. w/anhy. veinlets; and trc. dse, dk. gry., mica, dolo., platty shale partings. No shows.

Core #4 - 4315 - 4357. Recovered 42'

4315 - 4357 Siltstone, dirty dk. gry., dolo, highly mica, w/common hair line, xstal. anhy. filled fracs. vert. to oblique w/ abund. blk. interstit. hydro-carb. and min. med. gry.-grn. siltstone void of hydro-carb. giving a weak appear. of banding. Trc. dk. gry., dolo., highly mica, platty shale partings. Good odor of petrol on fresh-break.

Core #6 - 4359 - 4413, Recovered 54'

4359 - 4360 Siltstone. Dirty dk. gry., sli. calc., finely mica, w/ heavy blk. interstit. hydro-carb. residue. 15% spotted oil stain and bleeding.

4360 - 4379 Siltstone, as above, predom. med to dk. gry. siltstone w/ common intercalated dk. grnish gry. waxyshale parting from paper thin to 6" thick. Oil oder from siltstone on fresh break.

4379 - 4380 Siltstone, as above, w/5% spotted green oil stain and bleeding.

4380 - 4384 Siltstone, as above, w/grnish-gry. shale partings, as above, w/trc. spotty stain and bleeding the entire 4 feet, good oder and stain from 2 or 3 vert. calcite filled fracs.

4384 - 4386 Siltstone, as above, w/10 to 20% spotty to heavy stained common p. p. gas bubbles. All hd. and tight w/no visible porosity.

4386 - 4413 Siltstone and shale. Predom. siltstone, med. to dk. gry., w/varying amounts blk. hydro-carb. and common dk. grnish-gry. shale banding. Trc. spotty stain and bleeding, from 4386 to 4391', w/2023 min. vert tight fracs.; 5% stain @ 4319 & 4392 10% @ 4393, 15% @ 4394, 20% @ 4395, and 5% at 4396; 4396-4413 carries spotty to 5% oil stain and bleeding from a few vert. frac, good oder. No visible porosity.

Core #7 4450 - 4503, Recovered 53'

4450 - 4490 Limestone. Lt. to med.-gry., dse., micro. to finely xstal w/min. blk. carb. sty olites. All highly fossilliferous, w/common cool oolite strks. w/ no free oil in oolite grs. Highly frac. entire length of core w/trc. bleeding oil mainly from frac. Trc. gry-grn. dolo. shale partings. Core is very brittle, but has no visible porosity.

4490 - 4503 Limestone, as above, but commonly brecciated w/large cream to lt. gry. dolo. fragments. Highly fossiliferous strks w/min. oolites. Trc. of bleeding gas and oil from vert hair-line, calcite filled fracs.

Core #8 4503 - 4524, Recovered 21'

4503 - 4524 Shale, pale grn., dull, dolo., finely mica, w/common highly mica partings; w/min. discontin. lenses, gry. sli. calc. siltstone w/sli. odor on fresh break. Generally hd. and dse, w/ 2 or 3 vert dolo. filled fracs. No visible porosity in siltstone. Trc. pyrite.

Core #15 4579 - 4636, Recovered 57'

4579 - 4636 Shale, a continuous series of paper-thin alternations of pale doll grn., dse, dolo. shale, a dker grn. highly mica strks. entire core has thinly banded appearance. Trc. siltstone lenses w/faint oil odor. Min. vert. dolo. filled fracs. Trc. pyrite.

Reynolds #3 Samples -

Core #6 4413 - 4450', Recovered 37'

4413 - 4419	Siltstone and shale. Dirty dk. gry., calc., mica, w/good petrol odor on fresh break, w/interbed. lt. grn.-gry., dolo. shale partings, finely mica silty. All highly pyritic (finely dissem.), med. hd., dse, no visible par. gross form of core has wavy-banded appear due to discontin. lenses of dk. gry. siltstone. Dips, flat to 2° or 3°.
4419 - 4420	Siltstone, dirty dk. grey, as above, w/minor lt. gry.-grn. pyritic, dolo., silty, paper-thin shale partings. Minor hair-line dolo. filled fracs. Petrol odor in siltstone on fresh break.
4420 - 4425	Shale, Lt. grn.-gry., dolo., finely mica, highly pyritic, w/ abund. slickensides and min. contorted thin lenses dk. gry. siltstone. Good petrol odor in siltstone.
4425 - 4428	Siltstone - Dirty dk. gry., dolo., finely mica, w/common lge. flakes of biotite, pyritic, w/min. paper thin lt. grn.-gry. dolo. pyritic shale partings, no fracs. good petrol oder
4428 - 4429	Siltstone, as above, w/common fight, dolo-filled, fracs. w/ 20% spotted stain and pipi gas bubbles bleeding lt. grn. oil.
4429 - 4430	Siltstone. Lt. grn. -gry, shaley, dolo., finely mica, Trc. pyrite w/paper-thin, discont. lenses dk. gry. silstone. Trc. hairline fracs. good petrol oder. No stain.
4430 - 4431	Siltstone. Dirty dk.gry., finely mica, dolo., trc. pyrite, hd., dse., w/good petrol odor and 5% oil stain along 1 or 2 frac. Trc. P. P. bleeding near frac. planes. Less blk interstit hydrocarb.
4431 - 4432	Siltstone med. grn. gry., dolo. finely mica, trc. pyrite and nearly void blk. interstit. hydrocarb. Hd. dse, no frac., no stain, w/good oder in spots.
4432 - 4433	Siltstone, as above, w/trc. blk. hydrocarb. good odor w/15% oil stain and min. P. P. bleeding confined to 2 or 3, tight dolo.-filled fracs.
4433 - 4442	Siltstone, as above, becoming a dirty dk. gry. w/increased interstit. hydrocarb., w/min. highly mica parting planes. Good odor, but no visible stain. Hd., dse, no fracs.
4442 - 4444	Siltstone and shale, med. grn-gry and dkr. grn.-gry.,, dolo. shale in alternating paper-thin partings and discontinuous lenses. Abund, pyrite veinlets. Hd., dse, void blk. hydrocarb. w/weak oder and no fracs.
4444 - 4450	Siltstone, med. grn.-gry., finely mica, becoming highly calc., in part, w/concentration of blk hydrocarb. along a few tight hair-line fracs. Good petrol. oder, in spots. No visible stain or bleeding.

Core #7 - 4524 - 4579', Recovered 55'

4524 - 4539	Siltstone and shale, med. grn.-gry., w/min interstit. blk. hydrocarbon, dolo., finely mica, w/thinly interbedded lt. dull grn.-gry, dolo. shale, w/abund. crsly. xstal pyrite scattered throughout. Trc. interbed. wh. xstal anhy. and min. vert. fracs. w/anhy. fill. Trc, petrol odor.
4539 - 4541	Siltstone and shale, as above, in think wavy-bands of discont. siltstone lenses and shale partings. Common lt. oil stain and bleeding oil and gas from a few dolo. hair-line fracs. All hd. dse and pyritic.
4541 - 4548	Siltstone and shale, as above, in wavy, distorted bands paper thin to ½" thick. All crsly pyritic, w/min oil stain in a few vert. fracs.
4548 - 4550	Siltstone and shale as above, w/general increase in width of siltstone interbed. common vert fracs, w/trc. oil and gas bleeding. Pyrite more commonly in concentrated zones. Hd. and tight.
4550 - 4576	Siltstone and shale as above, generally thinly banded. Trc. pyrite. Trc. oil and odor in a few tight dolo. cemented fracs.
4576 - 4578	Silstone, dirty, dk. gry., w/heavy concentrat. blk. hydrocarb good oder and stain w/min spotty bleeding from fracs.
4578 - 4579	Shale, Lt. gry-grn., dolo, finely mica, w/thin discontinuous lenses siltstone, w/varying concentrat. of blk. hydro-carb. good odor, no stain. Trc. pyrite.
	Core #8 4886-4927', Recovered 41'
4886 - 4900	Siltstone. Lt. gry.-buff, dolo., finely mica, rare blk. chert grns. and blk. carb. inclus., w/common blue-white chert or silic. inclus., pyritic, common vert. hair-line calcited-filled fracs. and abund. white anhy. mottling. All hd. and dse. w/blk hydrocarb flakes along frac. planes. Trc. p. p. gas bubbles along fracs.
	Top Coconino Sandstone 4900' (?)
4900- 4903	Siltstone, as above, w/rare lge. qtz. "floater" grs., vert. calcite-filled fracs., w/blk. hydrocarb. inclus. Trc. mica, pyrite and min. anhy. mottling. No visible porosity.
4903 - 4905	Sandstone, Dirty lt. gry., fine to med. fine, quartzitic, vary sale., common blk. carb. inclus., sytolites, and trc. anhy mottling. All, hard and dse w/common lge qtz. "floater" grs. blk. chert pebbles and min blue-wh. chert inclus.
4905 - 4920	Sandstone, dirty-gry., quartzitic, as above, w/blk. hydro carb. flakes finely dissem. common wh. anhy. mottling, abund. blk. carb. inclus., styloites all, hd. dse w/poorly defined x-bedding pyritic.
4920 - 4923	Sandstone, Dirty dk. gry. to blk., qtzitic, very sli. calc. w/abund. blk. hydrocarb. dissem. Trc. hairpline calcite frac. Sill, common stylolites. All hd. & dse.

Core #12 4665 - 4694. Recovered 29'

4665 - 4694 Shale, Pale grn., dolo., platty w/alternating thin bands of dirty dk. gry. calc. siltstone w/good petrol odor on fresh break. The siltstone bands range from paper thin to 2" The shale contains abund. pyrite from min. dissem. to ½" crsly xstal. lenses. All hd. and dse. No fracs.

Core #13 4694 - 4747. Recovered 53'

4694 - 4747 Shale, dull, plae grn., dolo w/alternating discontinuous lenses dirty dk. gry. siltstone, w/oil odor on fresh break. Trc. calcite filled vert. fracs w/trc. oil the shale is very highly pyritic w/lenses up to ½" thick. Entire core has banded appearance. Dips flat to 2 or 3°.

Core #14 4747 - 4761. Recovered 14'.

4747 - 4761 Siltstone and shale in alternating bands of pale grn. and dirty dark gry. from paper thin to 6 or 8" shale is highly pyritic, finely mica, dolo siltstone contains abund. blk. interstit. hydro-carb. Trc. of fine fish roe calcite or dolo. spots in the shale. 1 or 2 vert. hair-line fracs w/faint petrol oder.

Core #15 4761 - 4795 - Recovered 34'

4761 - 4795 Siltstone, dirty dk.-gry. finely mica, w/paper-thin finely aren. strks. giving light and dk. gry. banded appear. All sli. calc., w/min. dk. gry. highly mica dolo. shale partings and trc pale grn. Trc. vert. calcite-filled fracs. Faint oil odor on fresh break. Well-defined x-bedding.

Core #16 4795 - 4895 - Recovered 50'

4795 - 4812 Siltstone - Dirty gry., as above, becoming highly calc. and transit. to silty limestone toward bottom @ 4813'. Generally thickly and massively bedded, losing banded appear. as above, w/min. dull grn. dolo. shale partings. Hd. dse. no visible poresity. Oil odor on fresh break.

4812 - 4837 Limestone. Lt. taned, gry. micro to finely xstal., sucrosic, w/abund. p. p. filled w/blk. gilsonite-liek residue, heavily interloaded w/vertical to oblique fracs all filled w/dse. to varying very crsly xstal. calcite w/gilsonite-liek residue. Common lt. gry. to wh. anhy. or dol. mottling. Abund. stylites and several vugs ½" across lined with dogtooth spar and gilsonite. Fair gas bleeding alongmost of core length. Trc. siltstone interbedding.

4837 - 4845 Limestone, as above, but highly brecciated and interlaced w/ hair-line fracs., calcite and gilsonite filled. Abund. cream dolo. inclusions. Vuggy, fair gas bleeding. Highly frac. and very brittle to rotten when broken w/hammer. Becoming darker gry. toward bottom.

Mounds #3 Samples - 3

Core #7- 4845-4886, Recovered 41'

4845 - 4886	Limestone, as above, w/Lt. and dk. gry. zones, has highly mottled appearance. Due to cream dolo. and wh. calcite inclusions. Highly frac. and interlaced hair-line calcite-filled. Common large vugs. w/calcite fill and gilsonite residue. Common stylolites and smokey-blue chert lenses. Trc. anhy. All dse. very brittle to rotten when broken. Trc. p. p. gas bleeding

8

Mounds #3 Samples -

4923 - 4927	Sandstone, as above, highly free w/ wh. calsite fill. Ltd. and dse, w/no shows!
4927 - 4938	Sandstone, as above, but very calc. w/common bleached "salt and pepper" conglom. strks. w/well-rounded, frosted, pitted grns and pebbles. Common stylites, x-bedding, and min. anhy. mottling. Trc. hair-line vert. fracs. Abund. interstitial blk. hydrocarb. cherty and silic.
4938 - 4941	Sandstone, as above, x-bedded, w/abund. wh. anhy. mottling.
4941 - 4944	Sandstone, as above, w/abund. socrosic, xstall., anhy. mottling and interbed. core has appearance of series lt. and kd. gry. wavy bands. Sandstone is becoming more commonly coarse grd.
4944 - 4945	Anhydrite, Lt. gry.-buff, interbedded, dse. and socosic.
4945 - 4947	Anhydrite, as above, w/thin sandstone break between.
4947 - 4950	Sandstone. Dk. gry. to blk., fine to crse, poorly sorted, qtzitic, w/abund. blk. hydrocarb., sli calc., in part, w/ styolites and min. calcite filled vert. fracs. No shows.
	Core #20 4950 - 4951, Recovered 1'
4950 - 4951	Quartzite. Dirty dk. gry. to blk. fine to crs., poorly sorted, glassy, silic. w/abund. blk. hydrocarb. very sli calc., in part very had. and dse. Cored 1' in 185 mins. Min. styolites.
	Core #21 4951 - 4958, Recovered 7'
4951 - 4956	Quartzite, as above, w/min. vert. to oblique calcite filled fracs. Very had., dse w/ abund, blk. hydrocarb.
4956 - 4957	Quartzite, as above, w/whi. conglom. strks. void of blk. hydrocarbon., giving bleached or mottled appearance.
4957 - 4958	Quartzite, Dk. gry. to blk., as above w/trc. of wh. crs. to conglom. mottling. Trc. vertical calcite-filler fracs.
	Core #11 - 4636 - 4665', Recovered 29'
4636 - 4641	Shale. Lt. gry.-grn., dolo., w/abund. finely dissem. pyrite. Trc. blk. slickensided shale partings. and trc. dk. gry. siltstone lenses. No shows. Trc. petrol odor.
4641 - 4642	Siltstone, Dirty dk.-gry., dolo. finely mica, hd., dse w/min. pyrite veinlets, w/moderate to heavily oil stain and min. bleeding in a few tight hair line fracs.
4642 - 4665	Shale. Lt. gry.-grn., as above, w/trc. gry.-grn. and dirty gry. siltstone lenses. Min dolo. filled hair-line fracs. Fair odor. No stain.
	Core #22 4958 - 4966 - Recovered 8'
4958 - 4966	Quartzite. Dirty dk. gry. fine to crs., w/common wh. very crs. to conglom. strks. Void of hydro-carb., common blk. carb styolites, and a few tight hair-line fracs. filed w/xstal.

94

[illegible]b. Trc. pyrite and all dolo. [illegible]ented. No shows.

Core #23 - 4966 - 4971, Recovered 5'

4966- 4971 — Quartzite, as above, w/common vert. hair-line fracs. All hd. and tight w/wh. xstal dolo. fill. Trc. tubular anhy. cstals.

Core #24, 4971-4998, Recovered 27'

4971 - 4998 — Quartzite. Dirty, dk. gry., calc., w/abund. blk. interstit. hydrocarb., w/common blk. stylolites, and common strks. and mottled wh. crs. to con l. sandstone, dolo., friable w/no visible porosity. The entire core is frac. and filled w/ wh. dolo. No bleeding from tight hair-line vert. fracs. There are two or thr e interbed. buff sugary anhy. zones 6" to 8" thick @ 4995, 4984, and 4982.

Core #25 4998 - 5013, Recovered 15'

4998 - 5013 — Quartzite, as above, sli. calc., w/hair-line vert. calcite filled structures. The entire length of core; the entire core has thin wh. calc., gritty strks and mottling void of interstit. hydro-carb. No gas or oil shows

Core #26 5013-5017, Recovered 4'

5013 - 5017 — Quartzite. Dk. gry. to blk., dolo hi. and ds., w/common blk. styolites. Vert. calcite, dolo and min. tabular wh. anhy xstals filled fracs. run entire length of core. Tr. sulphur odor on fresh break. No bleeding gas or oil.

Core #27 5017 - 5037, Recovered 20'

5017 - 5036 — Quartzite, as above, w/approx. 50/50 dk. gr . and whi. crs. to congl. sandstone interbedded vert. fracs. calcite, dolo. and trc. of anhy. filled run entire length of core. No odor, but a few p. p. gas bubbles were observed at 6027 scattered spots along core. No odor of petrol frc. sulfur odor.

5036 - 5037 — Sandstone - Wh. fine to crsly conglom., dolo. cement w/no visible porosity. Soft and friable. No odor.

Core #28 5037 - 5062, Recovered 25'

5037 - 5062 — Sandstone - Whi. fine to congl., dolo., as above, w/ less than 20% dirty dk. gry. quartzite strks and interbedding. All uniformly dse. w/no fracs. Trc. blk styolites. Trc. gas bleeding from one or two spots along core. No shows oil.

Core #29 - 5062- 5082, Recovered 20'

5062 - 5072 — Sandstone. Wh. dolo. gritty, as above, w/thin lenses dirty dk.-gry. quartzite. No odor. No fracs.

Mounds #3 Samples - #30

5072 - 5082	Quartzite, dirty, dk. gry. hd., dse w/hair-line vert. fracs. calcite filled running entire 10' w/heavier concentration of fracs. at 5077-5982. Trc. p. p. gas bleeding, min blk. stylites. No petrol odor.

Core #30 5082 - 5107, Recovered 25'

5082 - 5092	Sandstone. Wh., fine to congl., dolo. cement, generally hard dse. w/friable strks., well defined x-bedding composed of thin grey quartzitic strks. No odor. No fracs.
5092 - 5099	Sandstone. Generally dk. gry., w/alternating thin strks. wh. sandstone as above.
5099 - 5107	Sandstone. Predominantly wh.w/gry. mottling and interbedd. strks. No odor. No frac. entire core. well developed x-bedding.

Core #31, 5107 - 5133, Recovered 26'

5107 - 5110 cemented — Sandstone. Dirty dk. gry. and white mottled, fine to very crs and congl., sub ang. to well-round., frosted, pitted grs., dolo. cemented, hd, dse, w/abund. blk. interstit. hydro-carb. Trc. pyrite and hair-line fracs. w/blk. hydrocarb. cement or pyrite stain. Min. wh. sandstone in thinly banded strks.

5110 - 5153 — Sandstone, as above, but smo.-wh., w/rare blk. chert grs., soft, friable, dolo. cement, w/min lt. gry. banding duet. strks. Black interstit. hydrocarb well-defined x-bedding. Trc. pyrite. Dense, no visible por, and no odor. Entire core is approx. 80% wh., w/20% lt. gry.

Core #32, 5133 - 5146, Rec. 13'

5133 - 5146 — Sandstone, as above, wh. and lt. gry. banded. Generally soft and friable, w/no visible por. and no odor. Gross form of core is about 60% wh., and 40% lt. gry., in thin bands and 2 Or 3 zones 6 or 8" thick. Well defined x-bedding.

Core #33, 5146 - 5155, Recovered 9'

5146 - 5155 — Sandstone, dirty dk. gry. and snow-wh. fine to very crs., gritty, poorly sorted, sub ang. to well-round., pitted, dolo. cemented, w/rare dk. gry. and blk. chert grs. in the wh. Trc. disseminated pyrite. The entire core is massive, x-bedded, w/the dk. gry. coloring due to abund. blk. interstit. hydro-carb. The gry. occurs as thin discont. lenses, mottling, and thick interbed, giving an irreg. banded appearance. Approximately 60% gry. and 40% wh. No visible porosity. No shows, Trc. tight vert. hair-line fracs.

Core #34, 5155-5202, Recovered 47'

5155 - 5170 — Sandstone, Gen. dirty dk. gry. and wh. banded, as above, w/ common vert. to oblique fracs., tightly cemented w/very crsly. xstal. dolo. Abund. blk. hydro-carb. in gry. sandstone, and in xstal. dolo. Trc. think quartzitic strks. Massive, hd., dse, and x-bedd. No visible por.

5170 - 5177 — Sandstone, white, fine to verycrs., gritty, as above, trc. tight, vert., hair-line fracs. No visible por. No shows.

5177 - 5187 — Sandstone. Gen. dirty dk.-gry. and wh. banded, as in 5155-5170, above. Common vert. to oblique, dolo-cemented fracs. Trc. quartzitic strks. No shows. No visible porosity.

5187 - 5202 — Sandstone, More commonly wh. (approx. 75%), w/dirty dk. gry. mottling, banding and discontinuous lenses. All hd. and dse. w/no visible porosity. No shows. Massive, w/trc. vert. hair-line (tight) fracs.

Core #35 - 5202 - 5237, Recovered 35'

5202 - 5210 — Sandstone, wh. as above, w/min. gry. banding mottling, and discont. lenses of interstit. hydro-carb., min stylolites and 1 vert. tight frac. No visible porosity.

5210 - 5213 — Sandstone, dirty dk. gry., as above, highly frac., some tight and a few w/drilling mud pumped into breaks.

5213 - 5217 — Sandstone, wh., as above, hd., dse, no fracs.

5217 - 5237 — Sandstone. Gry., as above, w/common wh. banding, hd. dse, min. vert. fracs. No visibile porosity, x-bedded, massive, throughout entire core.

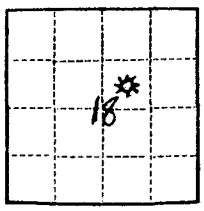
Core #36, 5237 - 5254, Recovered 17'

Lost 80 bbls. mud @ 5254'. Pulled out hole to test.

5237 - 5254 — Sandstone, as above, approx. 60% wh., w/40% dirty dk. gry. banding, mottling, and discont. lenses. Highly frac. w/open vert. to oblique fracs, w/min dolo. xstals along frac. places, common wh. sucros. anhy. in frac. @ 5238'. Entire core hd. dse, w/vert. fracs. along entire core length. No shows. No visible por. An apparent bedding plane near top of core has 27¼° dip.

Budget Bureau 42-R358.3.
Approval expires 12-31-55.

Form 9-331 a
(Feb. 1951)



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ORIGINAL FORWARDED TO CASPER

Land Office Salt Lake City
Lease No. U-06099
Unit Not Unitized

RECEIVED
JUN 23 1954

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR
NOTICE OF INTENTION TO SHOOT OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONMENT
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY
NOTICE OF INTENTION TO ABANDON WELL	Subsequent Report of Perforations X

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

July 6, 19 53

Well No. 3 is located 1980 ft. from (N) line and 1980 ft. from (E) line of sec. 18

NE 1/4 Sec. 18 (¼ Sec. and Sec. No.) | 15S (Twp.) | 12E (Range) | SLM (Meridian)

Mounds-Farnham Area (Field) | Carbon (County or Subdivision) | Utah (State or Territory)

The elevation of the derrick floor above sea level is ..... ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

7-5-53:
Perforated 7" casing with jet shots - 4 shots/foot - 2830-2870.

7-6-53:
Perforated 7" casing with jet shots - 4 shots/foot - 2880-2920.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company EQUITY OIL COMPANY

Address 806 Utah Oil Bldg.

Salt Lake City, Utah

By V E Peterson

Title V. E. Peterson

Approved 6-23-54
F C Scaife
District Engineer

U. S. GOVERNMENT PRINTING OFFICE 16—8437-5

Form 9-331
(May 1963)

For State of Utah

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424

5. LEASE DESIGNATION AND SERIAL NO.: Utah 06099

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Mounds

9. WELL NO.: #3

10. FIELD AND POOL, OR WILDCAT: East Farnham

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 18, T 15S, R 12E

12. COUNTY OR PARISH: Carbon

13. STATE: Utah

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [ ] GAS WELL [X] OTHER

2. NAME OF OPERATOR: Equity Oil Company

3. ADDRESS OF OPERATOR: Suite 806, 10 W. 3rd South, Salt Lake City, Utah 84101

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: NE¼, Sec. 18, T 15S, R 12E

14. PERMIT NO.:

15. ELEVATIONS (Show whether DF, RT, GR, etc.):

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[X]	CHANGE PLANS	[ ]				
(Other)				(Other)			

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Well is presently producing CO_2 Gas to plant in Wellington. Completed 1953.

Present Condition

7" cc @ 4315' w/500 sx PB 4285' (TOC 1150')
Perf 2830:70; 2880:2920.
2-7/8 tbg landed @ 2930'

APPROVED BY THE DIVISION OF OIL, GAS, AND MINING
DATE: Sept 22, 1976
BY: P L Driscoll

We propose to kill well, pull tubing, run 4½" w/packer shoe
Set shoe @ 2750-2800'
Cement 4½" csg to surface
Run 1½" tubing to 2930'
Place well on production

No additional surface disturbance for this activity.

18. I hereby certify that the foregoing is true and correct

SIGNED: C. E. Johnson TITLE: Engineer DATE: Sept. 16, 1976

(This space for Federal or State office use)

APPROVED BY: C. B. Feight TITLE: DISTRICT ENGINEER DATE: SEP 20 1976

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

CONDITIONS OF APPROVAL ATTACHED
TO OPERATOR'S COPY

Operator's

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO.: U-06099

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

8. FARM OR LEASE NAME: Mounds

9. WELL NO.: #3

10. FIELD AND POOL, OR WILDCAT: East Farnham

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 18, T 15S, R 12E

12. COUNTY OR PARISH: Carbon

13. STATE: Utah

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER CO2 Well

2. NAME OF OPERATOR: Equity Oil Company

3. ADDRESS OF OPERATOR: Suite 806, 10 W. 3rd South Salt Lake City, Utah 84101

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1980' FNL & 1980' FEL, Sec. 18

14. PERMIT NO.: Old Well

15. ELEVATIONS (Show whether DF, RT, GR, etc.): Est. 5770

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	X
REPAIR WELL	☐	CHANGE PLANS	☐				
(Other)				(Other)			

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Displaced 160 bbls 10.1# Brine Water down tubing. Unable to kill well. Displaced 575 cu. ft. 50-50 Posmix W/ 6.6# Salt/Sack down tubing, no returns. Mixed 300 Sax w/1/2# Flocele/Sax & 12½# Gilsonite per sax and displaced down tubing. Mixed 60 sax W/3% $CaCl_2$ and displaced 30 sax down tubing and 30 sax down tubing - 7" annulus. Mixed and pumped 60 sax down 10-3/4" 7" Annulus. Mixed 25 sax with $CaCl_2$ pumped in tubing, pressed to 750 psi. Pumped in 7" - 750 psi. Displaced down 10-3/4", staged 120 sax in 30 sax batches down 10-/3/4" on 90 sax, pressed to 500#. On final 30 sax 10/3/4" Annulus full - 10-2-76. Cut off 10-3/4" - 7" - 2-3/8" removed head, all standing full. Welded plate and dry hole marker, filled parts, pulled dead men. Job complete 10-7-76. Will dress location of mud by back blading with dozer when building new location.

18. I hereby certify that the foregoing is true and correct

SIGNED _____ TITLE Engineer DATE Oct. 8, 1976

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42 R1424.

5. LEASE DESIGNATION AND SERIAL NO.: U-06099

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER CO_2 Well

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: Equity Oil Company

8. FARM OR LEASE NAME: Mounds

3. ADDRESS OF OPERATOR: Suite 806, 10 W. 3rd South, Salt Lake City, Utah 84101

9. WELL NO.: #3

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 1980' FNL & 1980' FEL, Sec. 18

10. FIELD AND POOL, OR WILDCAT: East Farnham

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 18, T 15S, R 12E

14. PERMIT NO.: Old well

15. ELEVATIONS (Show whether DF, RT, GR, etc.): Est. 5770

12. COUNTY OR PARISH: Carbon

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	X	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

On attempting to rework this well as reported on the Sundry Notice dated Sept. 16, 1976, we were unable to kill the well with 10.1# Brine Water due to a leak in the 7" casing, location unknown.

We received verbal approval from the District Engineer, Mr. Guynn to:

Leave tubing in hole, displace cement down tubing, down 7" - 2-7/8" Annulus and down 10-3/4" - 7" Annulus.

Notice of Abandonment follows.

APPROVED BY THE DIVISION OF
OIL, GAS, AND MINING
DATE: Oct. 12, 1976
BY: P.L. Driscoll (K.O.)
(original signed by Mr. Driscoll)

18. I hereby certify that the foregoing is true and correct

SIGNED _____ TITLE Engineer DATE Oct. 8, 1976

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 9-331 (May 1963) File

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved
Budget Bureau No. 42 R1424.

5. LEASE DESIGNATION AND SERIAL NO.
U-06099

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Mounds

9. WELL NO.
#3

10. FIELD AND POOL, OR WILDCAT
East Farnham

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 18, T 15S, R 12E

12. COUNTY OR PARISH Carbon | 13. STATE Utah

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL ☐ GAS WELL ☐ OTHER CO_2 Well

2. NAME OF OPERATOR
Equity Oil Company

3. ADDRESS OF OPERATOR
Suite 806, 10 W. 3rd South Salt Lake City, Utah 84101

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
1980' FNL & 1980' FEL, Sec. 18

14. PERMIT NO. Old Well

15. ELEVATIONS (Show whether DF, RT, GR, etc.) Est. 5770

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:

TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐
REPAIR WELL	☐	CHANGE PLANS	☐
(Other)			

SUBSEQUENT REPORT OF:

WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOTING OR ACIDIZING	☐	ABANDONMENT*	X
(Other)			

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Displaced 160 bbls 10.1# Brine Water down tubing. Unable to kill well. Displaced 575 cu. ft. 50-50 Posmix W/ 6.6# Salt/Sack down tubing, no returns. Mixed 300 Sax w/1/2# Flocele/Sax & 12½# Gilsonite per sax and displaced down tubing. Mixed 60 sax W/3% $CaCl_2$ and displaced 30 sax down tubing and 30 sax down tubing - 7" annulus. Mixed and pumped 60 sax down 10-3/4" 7" Annulus. Mixed 25 sax with $CaCl_2$ pumped in tubing, pressed to 750 psi. Pumped in 7" - 750 psi. Displaced down 10-3/4", staged 120 sax in 30 sax batches down 10-/3/4" on 90 sax, pressed to 500#. On final 30 sax 10/3/4" Annulus full - 10-2-76. Cut off 10-3/4" - 7" - 2-3/8", removed head, all standing full. Welded plate and dry hole marker, filled parts, pulled dead men. Job complete 10-7-76. Will dress location of mud by back blading with dozer when building new location.

PROBABLY WILL NOT BE [illegible] UNTIL THE LOCN [illegible]

approved 10/11/76

PJA

18. I hereby certify that the foregoing is true and correct

SIGNED ______ TITLE Engineer DATE Oct. 8, 1976

(This space for Federal or State office use)

APPROVED BY ______ TITLE ______ DATE ______
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

[illegible] 10/8/76